

PROMISING NEW FRUITS.

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INTRODUCTION.

Since fruit culture first began to receive serious and systematic attention in the United States the question of what varieties to plant has been an important one in the minds of fruit growers and in the deliberations of horticultural and pomological societies.

That this matter will continue to need attention for many years to come is inevitable. Fruit culture is constantly being extended into new regions where new conditions or combinations of conditions of climate, soil, etc., exist; new marketing facilities are developed; and changes in the market demands occur. These factors influence in a marked degree the selection of varieties of fruits for planting by the more discriminating and farsighted fruit grower. More and more are varieties being planted to meet particular conditions and for special rather than for general purposes.

In this perpetual effort to obtain better varieties and such ones as will more satisfactorily meet particular needs, sorts that have long been in cultivation but which have remained largely in obscurity sometimes come into prominence because of their adaptability for some new requirement. Such varieties have frequently been included in the series of articles of which the present paper is a continuation.

The varieties described in this article have been selected because of the value which they are believed to possess in the further development of fruit culture.

The Department of Agriculture has no stock of these varieties available for distribution.

CORNELL APPLE.

SYNONYMS: *Cornell's Fancy, Cornell's Favorite.*

[PLATE XLIX.]

EARLY HISTORY.

The Cornell apple, strictly speaking, is not a new variety, yet it is unknown to a large proportion of growers. It has apparently

been in existence for 100 years, or perhaps longer. What appears to be an authentic account of its origin, published in 1869,¹ states that "The Cornell's Fancy Apple originated some sixty or seventy years ago on the farm of Gilliam Cornell, near the Street road, in Southampton Township, Bucks County, Pa."

From the dates mentioned it is evident that this variety originated in the last part of the eighteenth or the first part of the nineteenth century.

The original tree appears to have been a fence-row seedling. In its early years it attracted considerable local attention, and many scions of it were distributed in adjoining portions of Philadelphia and Montgomery Counties, Pa. The first published description of it appears to have been that of Downing in 1857.²

DESCRIPTION.

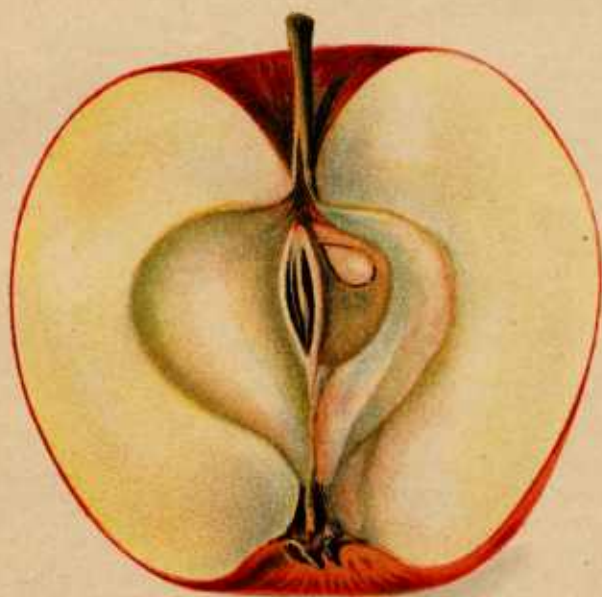
Form oblong conic; size medium to large; cavity regular, sometimes slightly irregular, usually large, rather deep, slope gradual, with russet markings; stem medium to long, moderately stout; basin usually regular, of medium size and depth, with gradual slope usually, sometimes furrowed or corrugated; calyx segments medium, converging; eye small to medium, closed; surface smooth, sometimes more or less ribbed; color creamy or yellowish white, washed with mixed red, striped with bright crimson, and slightly overspread with gray; dots usually rather large and conspicuous, occasionally minute, often aureole, grayish, sometimes brownish; skin rather thin, usually tender; flesh yellowish white, fine grained, very tender, moderately juicy; core conical, clasping, medium in size, slightly open; flavor mild subacid, pleasant; quality good to very good. Season August in middle latitudes.

The tree has been reported to lack vigor in some sections, but apparently in regions to which the variety is well adapted it makes a good growth and is usually productive. The fruit should not be left on the tree too long, as it has a tendency to crack and become mealy when fully ripe. Though it has become quite widely disseminated, it is grown only in very limited quantities and is largely unknown in the markets. In the further extension of early-apple culture it is believed that it can be made an important sort in middle latitudes.

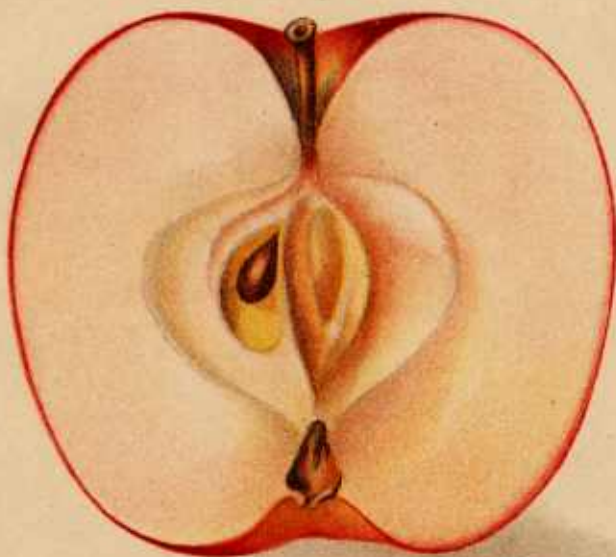
The specimen illustrated in Plate XLIX was grown by Thomas O. Duvall, Burtonsville, Montgomery County, Md.

¹ The Gardener's Monthly, vol. 11, 1869, p. 376.

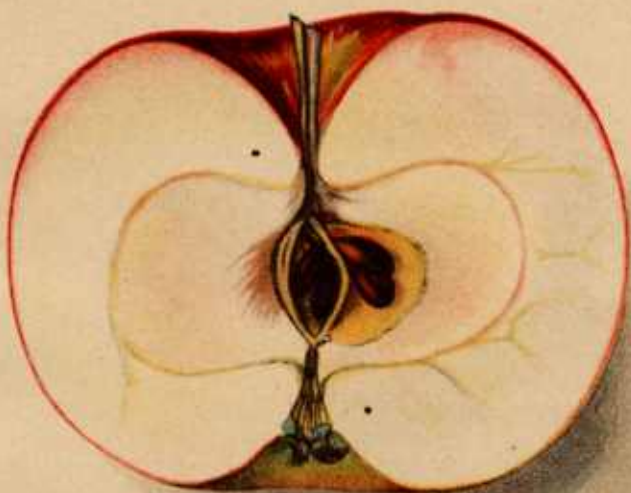
² Downing's Fruits and Fruit Trees of America, revised edition, 1857, p. 131.



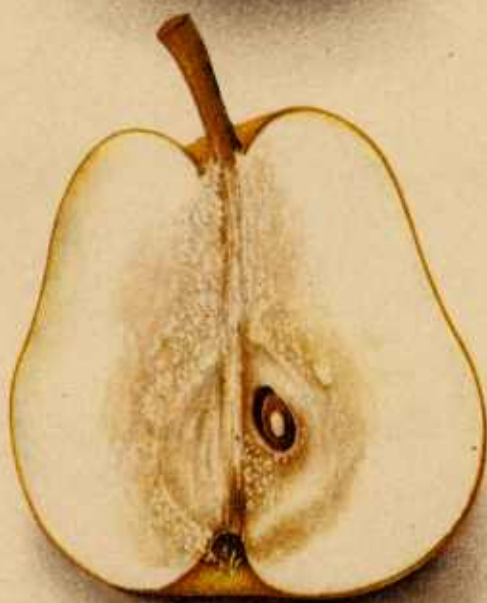
D. G. Passmore



D. G. Passmore



E. J. Schutt



J. G. Passmore

SAN JACINTO APPLE.

SYNONYM: *Mrs. Bryan*, erroneously.

[PLATE L.]

EARLY HISTORY.

The San Jacinto apple appears to have first come to light in the orchard of Dr. A. M. Ragland, of Pilot Point, Denton County, Tex., under the following circumstances:

About 1881 or 1882 he obtained 12 apple trees under the name "Mrs. Bryan" from a Georgia nursery.¹ When these trees came into bearing, four of them produced fruit which was entirely distinct in size, color, and time of ripening from the fruit borne by the other 8 trees, which were true to name. After several years of fruiting, Dr. Ragland was so favorably impressed with the value of the fruit from these four trees that he had the variety propagated. In the year 1900 it was propagated by T. V. Munson & Son and listed for sale in a catalogue issued in 1902 under the name "Mrs. Bryan," the fact that it differed from the variety entitled to that name not having been established at that time.

Meanwhile doubt had arisen as to which of these two varieties was the true "Mrs. Bryan." Specimens of the fruit were submitted to the proprietors of the nursery from which the trees came, but they were unable to identify them, having never seen a variety like these specimens so far as they knew. Specimens were also sent to Mrs. J. W. Bryan, of Dillon, Dade County, Ga., on whose place the Mrs. Bryan apple originated. She did not recognize the variety, but was positive that it was not the "Mrs. Bryan."

It having become evident that the identity of this variety was entirely unknown up to this time to the parties who were chiefly concerned and in view of the apparent value of the variety for southern latitudes and the interest which it was attracting it was named "San Jacinto"² by Dr. Ragland, in honor of the battle of San Jacinto, which took place on April 21, 1836, near the mouth of the river of that name and which resulted in the establishment of Texas as an independent republic.

In the fall of 1903 this variety was listed for sale under its present name in the catalogue of the Munson Nurseries, Denison,³ Tex., this being, so far as known, the first publication of the name.

Since the fact that it is distinct from "Mrs. Bryan" became evident some 8 or 10 years ago, its history has received more or less con-

¹ Letter from Dr. A. M. Ragland, December, 1911.

² Letter from Mr. T. V. Munson, December, 1911; also letter from Dr. A. M. Ragland, December, 1911.

³ Letter from Mr. T. V. Munson, December, 1911.

stant consideration, but no older tree of the same variety has been discovered to which the four trees planted in Dr. Ragland's orchard about 30 years ago can be traced. Apparently all of the trees of the variety which have been planted since it began to attract attention some 10 or 12 years ago trace directly to Dr. Ragland's orchard. It is now propagated under the name "San Jacinto" by a considerable number of nurseries.

DESCRIPTION.

Form roundish to oblong oval; size medium to large; cavity irregular, medium in size and depth, slope rather abrupt with russet markings, sometimes lipped; stem of medium length, fairly stout; basin regular, medium to large, slope gradual, more or less furrowed; calyx segments rather long, converging; eye medium to large, closed; surface smooth, except some slight ribbing; color yellowish to greenish white, washed with suffused red over nearly the entire surface, with few splashes and stripes of bright crimson; dots numerous, sometimes indented; skin medium thick, tenacious; flesh white or yellowish, sometimes slightly tinted; texture medium fine, breaking, juicy; core oval or conical, clasping, of medium size, open; flavor subacid, pleasant; quality good to very good. Season in northern Texas from the first of July until the middle of August, the main portion of the crop following the Red June apple.

The tree resembles the Red June, but it is a more vigorous grower than that variety. It begins bearing early and is proving productive. The fruit is also quite like the Red June type, and there is some reason for supposing that it is a seedling of that old and widely grown southern variety.

It seems to be particularly well adapted to southern latitudes, being one of the most satisfactory apples of its season in northern Texas, Oklahoma, and other southern and southwestern points.

The specimen illustrated in Plate L was grown by Dr. A. M. Ragland, Pilot Point, Denton County, Tex.

SHIAWASSEE APPLE.

SYNONYMS: *Shiawassee Beauty*, *Missoula*.

[PLATE LI.]

EARLY HISTORY.

Though the Shiawassee apple has been in cultivation for 60 years or more, it is grown but comparatively little. Its early history, as given by the late T. T. Lyon, is as follows:

The fruit originated from the pomace of a lot of grafted fruit grown in a nursery in Gaines, Genesee County [Mich.]. A portion of the trees grown from them were sold, ungrafted, to Mr. Beebe Truesdell, deceased, who planted them

in Vernon, Shiawassee County. Among these was the original tree of this variety, which has now borne full and regular crops for more than 10 years, with the exception of two seasons, when the crop was thinned by frost.¹

This variety belongs to the Fameuse group of apples, as does the McIntosh,² and is commonly supposed to be a seedling of Fameuse, which was a well-known variety in Michigan at the time when Shiawassee originated.

DESCRIPTION.

Form oblate, sometimes slightly conical; size medium to large; cavity broad, deep, rather abrupt; stem of medium length, moderately stout; basin regular, large, with gradual slope; calyx segments medium, converging, sometimes reflexed at tip; eye small to medium, open or partially closed; surface smooth; color pale yellow, washed over nearly the entire surface with mixed crimson stripes of purplish red, sometimes thinly overspread with gray; dots rather scattered, usually small, sometimes more conspicuous, grayish or yellowish in color; skin moderately thick, fairly tenacious, sometimes covered with a light bloom; flesh white, sometimes very lightly tinted with red, fine grained, tender, juicy; core conical or oblate conic, clasping, of medium size, open; flavor subacid, aromatic; quality very good. Season October to January.

It has been quite widely though not extensively grown throughout the older apple-producing regions of the Northern States and also in some of the Canadian Provinces. The tree is a strong, upright grower, but the branches become more or less drooping as it attains age. It is more highly esteemed for and is perhaps better adapted to home use than it is for general commercial purposes, but its high quality and attractive appearance, together with its productiveness, make it a variety of more than average merit for northern apple-growing regions. The tree is considered as hardy as the Fameuse, which indicates its adaptability to all but the colder apple regions. It is less susceptible to apple scab than the Fameuse, but sometimes shows a tendency to rot at the core.

Attention has been more or less directed to the Shiawassee apple in the Bitter Root Valley of Montana in recent years, because of its apparent usefulness in pollenizing the McIntosh apple, the latter being a leading commercial variety in that region. As its identity in the Bitter Root Valley, however, was unknown until recently, it has been locally propagated there under the name "Missoula."

The specimen illustrated in Plate LI was grown by H. C. and M. D. Ward, Pontiac, Oakland County, Mich.

¹ Michigan Farmer, Nov. 12, 1859, and Hovey's Magazine of Horticulture, February, 1860, p. 64.

² For illustration and description, see Yearbook, U. S. Dept. of Agriculture for 1901, p. 383.

AYER PEAR.

[PLATE LII.]

EARLY HISTORY.

The Ayer pear originated about 30 years ago, as a chance seedling which came up in a vineyard owned by Mr. O. H. Ayer, near Sibley, Douglas County, Kans. The small seedling tree had made a growth of only two or three leaves when discovered. Mr. Ayer had a spade with him at the time and transplanted it at once to a point just outside the vineyard, where it is still standing.¹ It was much neglected for some years and was rather late in coming into bearing, not fruiting until it was about 10 years old.

The tree is a rather slow, upright grower, similar to the Bartlett tree in form, but the foliage is dark colored like that of the Seckel. The owner is inclined to think it is a seedling of the latter, as a tree of that variety stood only a few rods distant from the place where the original tree first appeared. His assumption is that some one in passing through the vineyard while eating a Seckel pear from the nearby tree of that variety threw the core on the ground, and that the tree in question grew from one of the seeds which it contained. It has been propagated to a very limited extent, but not disseminated commercially.

DESCRIPTION.

Form obovate; size medium; cavity irregular, medium to large, depth medium, slope rather gradual, marked with russet folds or wrinkles; stem of medium length, moderately stout; basin regular, medium in size and depth, slope gradual, with shallow corrugations and russet markings; calyx segments short, sometimes rather fleshy, converging or slightly reflexed; eye medium, open or partially closed; surface somewhat undulating, moderately smooth, with some russeted areas; color light greenish or pale lemon yellow, frequently with a light-scarlet blush on exposed side; dots numerous, minute, russet; skin thin; flesh whitish or yellowish white, fine grained, buttery, melting, juicy; core oval, clasping, of medium size, closed; flavor mild subacid, rich; quality very good, fairly comparable with Seckel. Season in eastern Kansas the last of July and early August—two or three weeks earlier than the Bartlett.

From Mr. Ayer's observation of this variety he is inclined to think it is self-sterile. Up to the present time the tree has shown no tendency to blight, its rather slow habit of growth favoring it in this respect. In productiveness it is said to be about equal to the Bartlett.

Though the range of adaptability of this variety has not been determined, the high quality of the fruit and the degree of blight

¹ Letters from Mr. O. H. Ayer, November, 1911.

resistance which the tree has shown thus far suggest the probability of its possessing considerable merit for the Middle West.

The specimen shown in Plate LII was grown by Mr. O. H. Ayer, Sibley, Douglas County, Kans.

RUSSELL PEACH.

SYNONYM: *Russell No. 1.*

[PLATE LIII.]

In the development of new peach varieties with a view to extending the culture of this fruit, especially in middle and northern latitudes, improvement along the line of increased hardiness offers, perhaps, a wider field for advancement than almost any other. Any variety which possesses merit as to dessert and shipping qualities, productiveness, etc., and which can withstand without injury unusually low temperatures in winter or early spring is likely to prove an important factor in the peach industry as soon as its characteristics become generally known. The Russell peach appears to be a variety which possesses these qualities to a considerable degree.

EARLY HISTORY.

This variety originated at Wymore, Gage County, Nebr., about the year 1890, in an experimental seedling orchard belonging to J. M. Russell & Son, who at that time had a peach orchard of budded varieties at Wymore consisting of 65 acres.

The trees in the seedling orchard were produced from seeds selected from their best and hardiest varieties. The one in question grew from a seed of the Chili (*Hills Chili*) peach. Some of the characteristics of the tree and fruit are similar to the Alexander peach, and in view of the fact that a tree of that variety stood close to the Chili tree which produced the seed from which the Russell tree developed, there is some reason for supposing that it is a cross between these two varieties.

The first crop of fruit borne by this tree was in 1893, when it produced about 1 bushel.

This variety was originally designated as "Russell No. 1," and under this name it was briefly described by Mr. J. M. Russell in 1894.¹ Later, Messrs. Russell & Son developed the "Russell No. 2" and "Russell No. 3," but neither of these was disseminated to any extent.² Under the name "Russell" it was described in the report of the assistant pomologist in 1893.³ This report, however, was not published until some time during the year 1894.

¹ Annual Report, Nebraska State Horticultural Society, 1894, p. 116.

² Letter from J. M. Russell & Co., November, 1896.

³ Report of the Secretary of Agriculture, 1893, p. 291.

DESCRIPTION.

Form roundish; size medium to large; cavity regular, medium to large, deep, gradual; suture shallow except at cavity, extending from cavity to beyond the apex; apex a small point in the suture, in a slightly depressed basin; surface soft, velvety; color creamy white, blushed and splashed with crimson; down medium short, easily removed; skin thin, tender; flesh greenish white, with yellowish veins, tinged with red at stone, tender, melting, juicy; stone oval, free, small; flavor mild subacid, pleasant; quality good to very good; tree a rapid grower and an early and prolific bearer; glands globose. Season a month later than the Alexander peach, or about the middle of August, in southeast Nebraska.

This variety, though apparently not grown extensively, has become quite widely distributed in Nebraska, Iowa, and other middle western sections, where it is one of the most reliable bearers. It has proved to be one of the hardiest early freestone varieties, both in tree and bud, having endured with but slight injury winter temperatures which seriously damaged most other varieties.¹ The fruit, however, is said to be somewhat susceptible to brown-rot.

A late peach ripening in October, which originated at Lincoln, Ill., was introduced about the year 1894 under the name "Russell" and was distributed to some extent by a nursery located at that place. This variety does not appear to have become widely disseminated, and so far as known the name "Russell" as applied to this particular sort has been published only in the catalogues of the nursery company which disseminated it. That variety has not been propagated by this company since 1903.²

The specimen illustrated in Plate LIII was grown by Mr. F. O. Harrington, Williamsburg, Iowa County, Iowa.

LAIRE PLUM.

[PLATE LIV.]

EARLY HISTORY.

The Laire plum is a native variety which has gradually assumed much regional importance during the last few years. A recent investigation of the botanical status of this plum made by Mr. W. F. Wight, of the Bureau of Plant Industry, indicates that it is very closely related to *Prunus orthosepala* Koehne and may properly be considered a form of that species.

¹ Letter from Prof. R. F. Howard, Nebraska Agricultural Experiment Station, Dec. 11, 1911.

² Letter from Mr. W. E. Jones, December, 1911.

The Laire plum appears to have been brought into cultivation in the spring of 1876¹ by Mr. Abram Laire, living near Kirwin, Phillips County, Kans., and for whom it was named. It began fruiting two years after being brought in from the wild state. In a personal interview with Mr. Laire in September, 1910, he informed Mr. Wight that the original trees were obtained about 1878 or possibly a year or two later, the exact date apparently not being a matter of definite record. Mr. Laire, with his son, collected a number of young plum trees from various localities along Bow Creek. When these trees came into bearing there were about half a dozen which produced fruit of superior merit. The fruit of these trees was apparently the same, the trees probably all having developed as suckers from a single parent tree. This variety is the one to which the name "Laire" was subsequently applied.

The thicket from which these trees were obtained could not be re-located after they fruited, though Mr. Laire's son is inclined to think that they came from one which meanwhile had been destroyed by cattle.

DESCRIPTION.

Form roundish; size medium for a native variety; cavity regular, small, of medium depth, with gradual slope; stem short, very slender; suture very shallow, extending from cavity to apex; apex a small russet dot in a small basin at end of suture; surface smooth, glossy under bloom; color bright crimson yellow to dark red; dots numerous, russet; bloom profuse; skin thick, tenacious, slightly astringent; flesh yellow with whitish veins, meaty, juicy; stone roundish, cling, medium in size; flavor mild subacid, rich; quality good to very good; season September.

The Laire plum is a prolific bearer and is apparently especially well adapted to the central and western portions of Kansas and the corresponding regions of adjacent States. It was estimated in 1910 by Mr. E. Bartholomew that there were 100,000 trees of this plum growing in the northern central portion of Kansas.

That a fruit variety should have developed to so great a degree of importance in the region of its origin and remain largely unknown elsewhere is a rather remarkable occurrence in the recent annals of American pomology; that it represents, or is very closely related to, a species not recognized heretofore as possessing horticultural value is of interest, especially to those who are concerned in the amelioration of our native plums.

The specimen shown in Plate LIV was furnished by Mr. E. Bartholomew, of Stockton, Rooks County, Kans.

¹ Letter from Mr. E. Bartholomew, September, 1908.

MONCELT PLUM.

[PLATE LIV.]

EARLY HISTORY.

The Moncelt plum is a seedling of the "Red Nagate,"¹ a Japanese variety, and originated about 12 years ago on the grounds of R. Bates, Jackson, Aiken County, S. C. He considers² it a hybrid between "Red Nagate" and "Clyman," a "domestica" variety, but the botanical characters of the twigs and foliage, and of the fruit as well, appear to be those of the Japanese plum (*Prunus triflora*).

The original tree began bearing when 4 years old. As soon as its merits were apparent, the name by which it is designated was awaiting it, this having been previously selected by the originator to apply to the most promising variety in a lot of more than 17,000 seedlings of the "Red Nagate" which he was testing.

The name Moncelt was first published in a small catalogue issued by the originator in March, 1911, when the variety was commercially introduced.

DESCRIPTION.

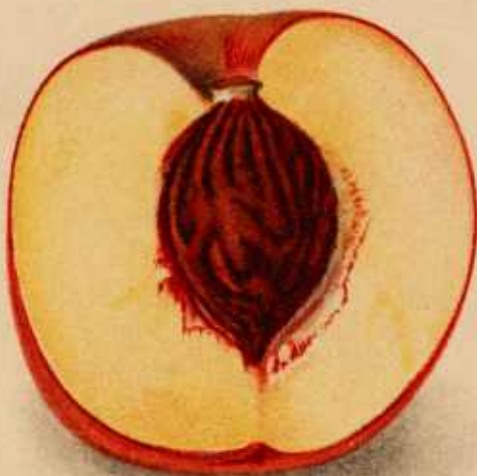
Form conical; size large; cavity regular, large, deep, slope gradual, marked with slight furrows; suture of medium depth at cavity, becoming more shallow toward and extending to the apex; apex a russet dot at end of suture; surface smooth or slightly undulating, sometimes with small areas of russet; color yellow, blushed and marbled over nearly entire surface with dark purplish red; dots very numerous, very small, russet; bloom bluish white; skin medium thick, tenacious, slightly bitter; flesh yellowish, translucent, meaty, half tender, juicy; stone roundish oval, cling, very small; flavor subacid, pleasant; quality very good. Season from about the 10th of June to the end of that month, in the locality where it originated.

The tree is a strong, vigorous, upright grower, with rather large rank leaves. It is said to compare favorably with Abundance and Burbank in productiveness, and thus far it has been remarkably resistant to brown-rot and is said to suffer only to a limited extent from the plum curculio. It has exceptionally good keeping qualities after being picked from the tree and is regarded as a good shipping variety.

The characteristics of this variety, both in tree and fruit, appear to indicate that it is of special promise for southern latitudes. It is

¹ The exact identity of this variety is uncertain. Much confusion existed in the nomenclature of the Japanese plums in the earlier years following their introduction into this country. The name "Red Nagate" was applied to several different varieties, the most important of which is the one now known as Red June. Mr. Bates's tree, while similar in some respects, is said by him to be clearly distinct from Red June.

² Letters from Mr. R. Bates, October and November, 1911.



D. B. Passmore

RUSSELL PEACH



LAIRE

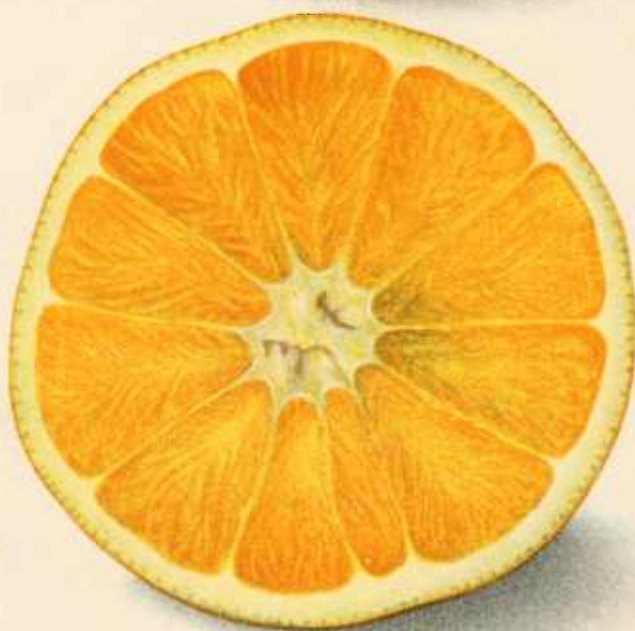


MONCELT



J. F. Newton





A. A. Newton

considered worthy of thorough test by those interested in plum growing in the South.

The specimen illustrated in Plate LIV was grown by the originator at Jackson, Aiken County, S. C.

PANARITI GRAPE.

[PLATE LV.]

The Panariti grape is one of the "currant" varieties, the fruit of which when cured constitutes the dried "currants" of commerce. Botanically this group of grapes belongs to *Vitis vinifera*, as do the other European varieties. They are largely grown in Greece and on some of the island possessions of that country, including Cephalonia and Zante. The principal districts on the mainland are in Morea, the ancient Peloponnesus. In these island and mainland districts nearly the entire population is engaged in and dependent on this industry.

The culture of these grapes in Greece has extended over many centuries. According to Eisen,¹ Pliny referred to them as early as 75 A. D. as being grown there, though they appear to have no further historical record for nearly a thousand years. Following the eleventh century, as indicated in Eisen's account, occasional reference is made to them in the old herbals and in other literature of the fourteenth, fifteenth, and sixteenth centuries, under such names as "reysyns de Corauntz," "Corauntz," "corent," "reysonys of Corawnce," "raysns of Coren," and "currans." By gradual evolution the name "currant" appears to have developed from the name Corinth, the port whence the earlier supplies of this fruit reached western Europe. It appears evident that the name "currant" or "currantes" was applied to this type of grape, at least when dried, as early as 1578.

The common garden currants (*Ribes* species) do not appear to have come into cultivation until toward the close of the sixteenth century. So far as historical records show, the dried fruit of the "currant" grape had then been an article of commerce in some of the European markets for several centuries, so that there seems to be no reason to doubt that the name currant was applied to the genus *Ribes* because of the resemblance which its racemes of fruit bore to clusters of the "grape of Corinth."

The importance of the currant grape not only to very large numbers of the peasant population of Greece, but to the Government as well, forms an example which is probably without parallel elsewhere in the world. The part taken by the Government in recent years in maintaining the stability of this industry through control of a portion of the crop is equally remarkable.

¹ Eisen, Gustav. The Raisin Industry, 1890, p. 6.

Following the destruction of the vineyards in France by the phylloxera, about 1880 to 1890, there developed in that country a heavy demand for the dried currants of Greece for use in making wines, brandies, etc. This resulted in high prices for the fruit and, consequently, a very large increase in the acreage devoted to grape culture in Greece. In fact, it is stated¹ that the desire to extend currant-grape culture became so great in many instances that large orchards of mature olive trees were sacrificed to this end, as well as many mulberry trees that had been grown to furnish food for silkworms. Thus, in some regions grape culture became the sole industry.

The introduction into France of grape stocks from the United States which were resistant to phylloxera and the rehabilitation of the grape industry, followed by the imposing in 1896 of import taxes which practically excluded the currant grapes of Greece from France, caused a great crisis in this industry in Greece. Large regions were dependent upon grape culture as a means of support. With the French markets, which had previously taken great quantities of currants, virtually closed, the production was far in excess of the demand.

At this juncture the Greek Parliament passed, in 1895, the "parakrasis" or "retention" act, the object of which was to so control the output of currants each year as to prevent, so far as possible, overstocking the markets, and thus to maintain satisfactory prices.

In its operation this law imposes upon every producer a tax of 15 per cent of the product which he exports, payable either in money or by depositing in Government warehouses the required quantity of currants. Thus, only 85 per cent of the crop of any one year, or its equivalent in value so far as the producer is concerned, can be put upon the market. The currants received by the Government must be used for other purposes than those to which this commodity is usually put.

In connection with the passing of the "retention act" the matter of establishing a "currant bank" of Greece was much agitated, the object in view being to provide a source from which every producer who deposits a certain quantity of currants in a Government depot or warehouse should be entitled to draw money from the bank, or to hypothecate his crop. Such a bank, however, was not established until 1899, when with the Government proceeds from the sale of currants to distillers, etc., it was formed with a capital of 3,500,000 drachmas (about \$675,500).

The currant has long been the leading commodity of export from Greece. The tax of 15 per cent of the crop exported forms one of the principal sources of revenue for the Government; at the same

¹ Horton, George. The Currant Trade of Greece. United States Consular Reports, vol. 50, pp. 243-245.

time the diverting of that proportion of the crop each year from the ordinary channels of commerce doubtless has, in some seasons at least, a material effect upon the market price received for the exported product.

Current grapes were apparently introduced into some of the Vinifera districts of California as early as 1861,¹ but they have not yet attained commercial importance there. Imports into the United States in 1910 totaled more than 33,000,000 pounds of currants, having an approximate value of \$1,178,750. The imports of currants during that year from all other countries were less than 250,000 pounds.²

EARLY HISTORY OF THE PANARITI GRAPE IN THE UNITED STATES.

The history of the Panariti grape in the United States dates from the receipt from Panariti, Greece, through Mr. David Fairchild, agricultural explorer of this department, of a shipment of cuttings which reached Washington May 9, 1901. Concerning this grape Mr. Fairchild states:³

The variety of grapes producing the *currants* or *corinths* of commerce. These cuttings were purchased in the village of Panariti, which lies among the mountains back of Xyloncastron. This village is noted for producing some of the finest corinths in Greece.

Several varieties of currant grapes are grown in Greece, though the crop differences are not distinguished in that country by varietal names, but by the name of the regions in which they are produced; thus, Panariti grapes are grapes grown in the vicinity of the village of Panariti.

Soon after the importation of cuttings was received at the department they were distributed among grape growers in representative Vinifera grape-growing districts in California, Arizona, and southern Nevada. More recently the variety has been more widely disseminated in connection with the viticultural investigations of the Bureau of Plant Industry.

DESCRIPTION.⁴

Bunch very long, almost cylindrical but tapering, with quite an enlargement toward end of bunch, often shouldered, straggling, loose; stem $1\frac{1}{2}$ to 2 inches long, of medium size, soft and fleshy; berry round, very small, not averaging much over one-fourth of an inch in diameter; surface smooth; color amber with whitish bloom; skin rather

¹ Elsen, Gustav. The Raisin Industry, 1890, p. 38.

² Bulletin 90, Bureau of Statistics, entitled "Imports of Farm and Forest Products, 1908-1910," p. 42.

³ Bulletin 66, Bureau of Plant Industry, entitled "Seeds and Plants Imported during the Period from September, 1900, to December, 1903, Inventory No. 10," p. 84, No. 6429.

⁴ Description furnished by Mr. George C. Husmann, Pomologist in Charge of Viticultural Investigations, Bureau of Plant Industry.

thin; flesh white, soft, fairly juicy; flavor sweet with the characteristic flavor strongly developed. Season early August at Fresno. Its chief value will doubtless be for drying. Wood light brownish green, somewhat striped, with internodes 3 to 4 inches in length; rather slender. In the first crop, which is the only one of real value, the berries are seedless, but the second and third crop grapes contain some seeds.

The question of the most suitable resistant stocks for this grape, as well as the methods of pruning, training, and other cultural operations, is being investigated at the cooperative experiment vineyard maintained by the Bureau of Plant Industry at Fresno, Cal. Indications at present suggest that the matter of stocks may be of much importance.

Cultural methods also call for careful consideration in any development of the currant industry that may occur in this country. For instance, in Greece it is a common though not universal practice to girdle the vines to increase productiveness. It is understood that in Australia girdling is the usual practice, as light crops are habitual unless this is done. Whether this method or some modified form of it can be effectively or advantageously adopted in this country is as yet undetermined.

The adaptability of this variety to successful culture, in at least some of the *Vinifera* grape districts of California, appears to have been demonstrated. Some of the grape growers are already becoming interested in it and it seems probable that in the near future the production of it will become of considerable commercial importance in the *Vinifera* grape districts in this country.

Ripening early, as it does, before most other varieties mature, the fruit can be handled advantageously with the same vineyard crews that are required later for harvesting the wine and table grapes. As the ripening time in California is during the rainless period, when the climatic conditions are the most favorable for drying the fruit, there is everything to encourage its planting by those desirous of producing currants.

The cluster illustrated in Plate LV was grown at the cooperative experiment vineyard, Fresno, Fresno County, Cal.

THOMSON ORANGE.

SYNONYMS: *Thomson's Navel*, *Thomson's Improved Navel*, *Thompson*, *Thompson Improved*, *Thompson's Improved Navel*.

[PLATE LVI.]

One of the remarkable features of the orange industry of California is the fact that it has been built up so largely on a single variety, the Washington Navel¹ or "Bahia," which was introduced into that

¹ For a concise history of this variety, see Bulletin 123, Bureau of Plant Industry, entitled "The Decay of Oranges while in Transit from California," p. 9.

State from Brazil by the United States Department of Agriculture less than 40 years ago. The shipments of oranges from California for the crop year 1910-11 amounted approximately to 39,500 cars. Of these three-fourths are estimated to have been of the Washington Navel variety.

In view of the large production of this variety and the high esteem in which it has been held for 30 years or more, it appears strange that no seedlings of it have yet attained the distinction of commercial introduction in our orange districts. This is doubtless in large part due to the rarity of seeds in its fruit when grown under ordinary orchard conditions. In recent years there have appeared in the California orange districts several well-authenticated bud sports or variations, one or two of which have been planted commercially to some extent, the Golden Buckeye being an example.

Of less certain origin but more important commercially than the above-named variety is the Thomson, which was disseminated by the late A. C. Thomson, of Duarte, Los Angeles County, Cal., about 1891.¹ The published accounts of the origin of the variety are conflicting. The first statement² was to the effect that it was an improvement on the Washington Navel accomplished by budding that variety on a St. Michael stock, then budding from this tree on a Mediterranean Sweet stock, thus securing the cumulative effect of the two stocks upon the Washington Navel. The statement was received with much incredulity by the horticultural public and three years later the introducer published in the *Pacific Rural Press*³ an account in which it was implied that the variety was produced by "split-bud" propagation but without details as to what varieties had been used as the parents. At the same time he submitted to the editor specimen buds prepared to illustrate the method which he had described.

The inadequacy of the evidence submitted and the well-known tendency of the Washington Navel orange to produce bud sports has resulted in a firm conviction in the minds of many orange growers that the Thomson in fact originated as a bud sport rather than through any special process or expert manipulation of buds.

The exceptional beauty and attractiveness of the fruit aroused much interest among growers, which was accentuated by the award of a first premium to the variety when it was exhibited at the Columbian Exposition in Chicago in 1893. Considerable plantings of it are now found throughout southern California and some in other orange-growing sections. As a dessert fruit it is not equal to the parent variety, lacking in juiciness and sprightliness of flavor.

¹ California Fruit Grower and Fruit Trade Review, vol. 8, No. 14, Apr. 4, 1891, p. 211, and No. 19, May 9, 1891, p. 290.

² Azusa Pomotropic, Mar. 19, 1891, p. 7.

³ Pacific Rural Press, vol. 47, no. 23, June 9, 1894, p. 433.

DESCRIPTION.

Form slightly oblong; size above medium to large; cavity small, furrowed; apex, navel markings either small or quite prominent; surface smooth or slightly undulating; sometimes very shallow, longitudinal furrows; stem slender; color pale orange yellow, reddening somewhat after picking, but usually not as richly colored as the Washington Navel; oil cells numerous, small, indented or even with surface; rind relatively smooth, rather closely adherent, usually thin and rather tender; segments 10 to 12, irregular in size with open center; flesh, rich yellow to deep orange in color, translucent, moderately tender; cells small, regular, enveloping tissue thin; juice translucent, not very abundant; seedless; flavor sweet, sprightly, pleasant; quality good, but not equal to the Washington Navel when the latter is well grown. Its shipping season is about the same as that of the Washington Navel, but it reaches full maturity about one month earlier than that variety. The satiny surface and bright color give the variety special popularity for certain trade in the large cities, where appearance rather than quality determines demand and value. The tree characteristics of the Thomson are quite similar to the Washington Navel. It is reported by Shamel¹ to be quite subject to "sporting," numerous branches on Thomson trees yielding fairly typical Washington Navel fruits. It is reported to succeed well in Arizona and has recently been reported² as doing well in Algeria under conditions to which the Washington Navel orange does not appear to be well adapted.

The specimen illustrated in Plate LVI was grown at Riverside, Cal.

¹ Letter from Mr. A. D. Shamel, February, 1912.

² Letter from Mr. Walter T. Swingle, December, 1911.